PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

<table>
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100011

22/F,Great Eagle Centre, 23 Harbour Road,
Wanchai, HONG KONG, P.R.China

CHINA PATENT AGENT (H.K.) LTD

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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43 *bis*.1)

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</table>

Date of mailing   2 5 JAN 2007 (2 5 · 0 1 · 2 0 0 7)

Applicant's or agent's file reference FPEL06150019	**FOR FURTHER ACTION** see paragraph 2 below

International application No. PCT/CN2006/000545	International filing date (*day/month/year*) 29 Mar. 2006 (29.03.2006)	Priority date (*day/month/year*)

International Patent Classification (IPC) or both national classification and IPC   See supplemental box

Applicant   INTEL CORPORATION ET-AL

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1. This opinion contains indications relating to the following items:

   ☒ Box No. I Basis of the opinion
   ☐ Box No.II Priority
   ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   ☐ Box No. IV Lack of unity of invention
   ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i)with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   ☐ Box No.VI Certain documents cited
   ☐ Box No. VII Certain defects in the international application
   ☐ Box No.VIII Certain observations on the international application
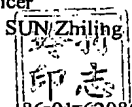
2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Date of completion of this opinion 23 Dec. 2006 (23.12.2006)	Authorized officer SUN Zhiling Telephone No. 86-01-62086084

Form PCT/ISA/237(cover sheet)(April 2005)

Box No. I	Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed
   ☐ a translation of the international application into _____ , which is the language of a translation
   furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of :

   a. type of material
      ☐ a sequence listing
      ☐ table(s) related to the sequence listing

   b. format of material
      ☐ on paper
      ☐ in electronic form

   c. time of filing/furnishing
      ☐ contained in the international application as filed
      ☐ filed together with the international application in electronic form
      ☐ furnished subsequently to this Authority for the purposes of search

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

Box No. V   Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement:

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations

The invention relates to optimization of network protocol options by reinforcement learning and propagation. The following documents cited in this report are considered to be the related prior art.

D1:(CN1402494A), which discloses a method for selecting transmission protocol based on client terminal feedback.

D2:(US7013238B1), which discloses an item recommendation method in computer system.

D3:(CN1659800A), which discloses a packet transmitting apparatus for wireless communication application.

About the novelty:

D1, D2, D3 don't disclose all the features of independent claims 1,8,15. So the solutions of independent claims 1,8,15 meet the requirements of Article 33 (2) PCT and have the novelty. Therefore the dependent claims 2-7,9-14,16-20 also meet the requirements of Article 33 (2) PCT.

About the inventive step:

For the independent claim 1, D1 is regarded as being the closest prior art to the present invention, which discloses (see page 7,8 in D1): The server initiates a test packet and sends the test packet to clients. The client collects and analyzes the result of the test, and sends the feedback information to the server. The server selects the corresponding transmission protocol according to the feedback information of the client and sends the selected result to the client. The server and the client both configure the information of the network interface according to the transmission protocol of the selected result. According to the transmission protocol of the selected result the server sends the packet to the client. The different characters compared with claim 1 in D1 are that:the learning component, and conducting by the learning component different trials of one or more options in different states for network communication via a protocol of the network. But the above features have been disclosed by D2 (see column 4 in D2): the system adjusts its internal parameters based on the feedback after a sufficient number of iterations. It is obvious that the person skilled in the art can get the subject matter of claim 1 considering D1 and D2 in combination. So, the solution of claim 1 does not meet the requirements of Article 33 (3) PCT, and does not involve the inventive step.

The additional features of the dependent claims 2-7 can be obtained obviously by the person skilled in the art from the contents taught by D1 (see page 7,8 in D1) and D2 (see column 4 in D2) and these characters well

Supplemental Box:

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box No. V   Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

known in the art. Therefore claims 2-7 do not involve an inventive step, and do not meet the criteria set out in Article 33(3) PCT.

For the independent claim 8, D1 is regarded as being the closest prior art to the present invention, which discloses (see page 7,8 in D1): The server initiates a test packet and sends the test packet to clients. The client collects and analyzes the result of the test, and sends the feedback information to the server. The server selects the corresponding transmission protocol according to the feedback information of the client and sends the selected result to the client. The server and the client both configure the information of the network interface according to the transmission protocol of the selected result. According to the transmission protocol of the selected result the server sends the packet to the client. The different characters compared with claim 8 in D1 are that: an option negotiation component, a file transfer component, and adjusting the selection of the one or more options based on the rewards. D2 has disclosed the following features (see column 4 in D2): the system adjusts its internal parameters based on the feedback after a sufficient number of iterations. It is obvious that the person skilled in the art can get the subject matter of claim 8 considering D1 and D2 and the technical features well known in the art. So, the solution of claim 8 does not meet the requirements of Article 33 (3) PCT, and does not involve the inventive step.

The independent claim 15 requests for a system comprising a network environment and a server coupled to the network environment via a network interface, wherein the features included in the server is same to those in the apparatus of claim 8. As the solution of claim 8 does not involve the inventive step, those skilled in the art can obtain the subject matter of claim 15 considering D1 and D2 and the technical features well known in the art. So, the solution of claim 15 does not meet the requirements of Article 33 (3) PCT, and does not involve the inventive step.

The additional features of the dependent claims 9-14,16-20 can be obtained obviously by the person skilled in the art from the contents taught by D1 (see page 7,8 in D1) and D2 (see column 4 in D2) and these characters well known in the art. Therefore claims 9-14,16-20 do not involve an inventive step, and do not meet the criteria set out in Article 33(3) PCT.

About the industrial applicability:

Claims 1-20 have industrial applicability under Article 33(4) PCT, because the technology schemes claimed can be made or used in the industry.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of : International Patent Classification (IPC) or both national classification and IPC

H04L29/06(2006.01)i
H04L12/56(2006.01)n

PATENT COOPERATION TREATY

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Applicant
INTEL CORPORATION ET-AL

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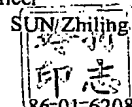
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Name and mailing address of the ISA/CN	Date of completion of this opinion	Authorized officer
The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	23 Dec. 2006 (23.12.2006)	SUN Zhiling 印 志 Telephone No. 86-01-62086084

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H04L29/06(2006.01)i
H04L12/56(2006.01)n